

REMARKS

Claims 1-15 and 19-21 are pending in the application.

Claims 2-7, 9-12, and 19-21 are found to contain allowable subject matter.

Claims 1, 8 and 13-15 are rejected under 35 USC 103(a) as being unpatentable over Antonuk et al. (hereinafter Antonuk) in view of Kusumoto et al. (hereinafter Kusumoto) and Wolf et al. ("Silicon Processing for the VLSI Era," hereinafter Wolf).

Applicant notes that a US patent to Kitakado (US 7176068) was discussed in rejecting the claims but was not cited in the rejection. It is respectfully submitted that the rejection should be clarified as to which references constitute the rejection.

With regard to the rejection of claim 1 as being obvious by Antonuk, Kusumoto and Wolf, applicant's claim 1 recites, among other things, "depositing the active semiconductor film for the diode over the interconnection film and the etch-stop film with a third process that involves a third processing temperature, the first and second processing temperatures being higher than the third processing temperature" (emphasis added).

It appears the Office Action points to Kusumoto and Wolf as teaching the above mentioned claimed features. In particular the Office Action points to Kusumoto col. 6, line 54 to col. 7, line 18 and to page 179 of Wolf. However, a review of the cited references fails to find the claimed features.

Kusumoto only describes an under layer of silicon oxide film 202 and a non-monocrystal silicon film formed on the film 202. Subsequently, a nickel acetate solution is coated on the amorphous silicon film. Kusumoto further describes thermal annealing at 600 degrees C. There is no suggestion of the claimed features described in claim 1. For example, depositing the active semiconductor film for the diode over the interconnection film and the etch-stop film.

Furthermore, there is no suggestion that the first and second processing temperatures being higher than the third processing temperature. Wolf describes a deposition temperature below 580 degrees C, which the Office Action points to as being the temperature of the third process. However, Kitakado (not cited in the rejection but mentioned in the detailed description), which the Office Action points to as showing the 2nd processing temperature describes in col. 8, lines 56-58, a 300-650 temperature range with a preferable range of 500-550 degrees C. Thus, one skilled in the art would not arrive at

applicant's claimed invention since Kitakado suggests a preferable range of 500-550 degrees C and Wolf and Kusumoto both suggest higher temperatures. In contrast, claim 1 recites the first and second processing temperatures being higher than the third processing temperature.

For at least the foregoing reasons it is respectfully submitted that the combination of references fails to teach each and every feature recited in applicant's claim 1; therefore, the rejection should be withdrawn.

Claims 8 and 13-15 depend from claim 1 and include at least the above mentioned features of claim 1. Because these dependent claims include the features of claim 1 and further distinguishing features they should likewise be allowed.

Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are solicited. In the event that the fees submitted prove to be insufficient in connection with the filing of this paper, please charge our Deposit Account Number 50-0578 and please credit any excess fees to such Deposit Account.

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